

General

Guideline Title

Falls: assessment and prevention of falls in older people.

Bibliographic Source(s)

National Institute for Health and Care Excellence (NICE). Falls: assessment and prevention of falls in older people. London (UK): National Institute for Health and Care Excellence (NICE); 2013 Jun. 33 p. (Clinical guideline; no. 161).

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: National Collaborating Centre for Nursing and Supportive Care. Clinical practice guideline for the assessment and prevention of falls in older people. London (UK): National Institute for Clinical Excellence (NICE); 2004 Jun. 185 p.

Recommendations

Major Recommendations

Note from the National Guideline Clearinghouse (NGC): This guideline was developed by the Centre for Clinical Practice at the National Institute for Health and Care Excellence (NICE). See the "Availability of Companion Documents" field for the full version of this guidance.

Note: The wording used in the recommendations in this guideline (for example, words such as 'offer' and 'consider') denotes the certainty with which the recommendation is made (the strength of the recommendations). See the end of the "Major Recommendations" field for further descriptions of the strength of recommendations.

Labelling of recommendations: New recommendations have been added about preventing falls in older people during a hospital stay. These are labeled [new 2013]. The original recommendations from NICE clinical guideline 21 are incorporated unchanged (except for minor wording changes for the purposes of clarification only). These are labeled [2004] or [2004, amended 2013].

Preventing Falls in Older People

Case/Risk Identification

Older people in contact with healthcare professionals should be asked routinely whether they have fallen in the past year and asked about the frequency, context and characteristics of the fall/s. [2004]

Older people reporting a fall or considered at risk of falling should be observed for balance and gait deficits and considered for their ability to benefit from interventions to improve strength and balance. (Tests of balance and gait commonly used in the United Kingdom [UK] are detailed in Section 3.3 of the full version of the original guideline.) [2004]

Multifactorial Falls Risk Assessment

Older people who present for medical attention because of a fall, or report recurrent falls in the past year, or demonstrate abnormalities of gait and/or balance should be offered a multifactorial falls risk assessment. This assessment should be performed by a healthcare professional with appropriate skills and experience, normally in the setting of a specialist falls service. This assessment should be part of an individualised, multifactorial intervention. [2004]

Multifactorial assessment may include the following:

- Identification of falls history
- Assessment of gait, balance and mobility, and muscle weakness
- Assessment of osteoporosis risk
- Assessment of the older person's perceived functional ability and fear relating to falling
- Assessment of visual impairment
- Assessment of cognitive impairment and neurological examination
- Assessment of urinary incontinence
- Assessment of home hazards
- Cardiovascular examination and medication review [2004]

Multifactorial Interventions

All older people with recurrent falls or assessed as being at increased risk of falling should be considered for an individualised multifactorial intervention. [2004]

In successful multifactorial intervention programmes the following specific components are common (against a background of the general diagnosis and management of causes and recognised risk factors):

- Strength and balance training
- Home hazard assessment and intervention
- Vision assessment and referral
- Medication review with modification/withdrawal [2004]

Following treatment for an injurious fall, older people should be offered a multidisciplinary assessment to identify and address future risk and individualised intervention aimed at promoting independence and improving physical and psychological function. [2004]

Strength and Balance Training

Strength and balance training is recommended. Those most likely to benefit are older people living in the community with a history of recurrent falls and/or balance and gait deficit. A muscle-strengthening and balance programme should be offered. This should be individually prescribed and monitored by an appropriately trained professional. [2004]

Exercise in Extended Care Settings

Multifactorial interventions with an exercise component are recommended for older people in extended care settings who are at risk of falling. [2004]

Home Hazard and Safety Intervention

Older people who have received treatment in hospital following a fall should be offered a home hazard assessment and safety intervention/modifications by a suitably trained healthcare professional. Normally this should be part of discharge planning and be carried out within a timescale agreed by the patient or carer, and appropriate members of the health care team. [2004]

Home hazard assessment is shown to be effective only in conjunction with follow-up and intervention, not in isolation. [2004]

Psychotropic Medications

Older people on psychotropic medications should have their medication reviewed, with specialist input if appropriate, and discontinued if possible to reduce their risk of falling. [2004]

Cardiac Pacing

Cardiac pacing should be considered for older people with cardioinhibitory carotid sinus hypersensitivity who have experienced unexplained falls. [2004]

Encouraging the Participation of Older People in Falls Prevention Programmes

To promote the participation of older people in falls prevention programmes the following should be considered.

- Healthcare professionals involved in the assessment and prevention of falls should discuss what changes a person is willing to make to prevent falls.
- Information should be relevant and available in languages other than English.
- Falls prevention programmes should also address potential barriers such as low self-efficacy and fear of falling, and encourage activity change as negotiated with the participant. [2004]

Practitioners who are involved in developing falls prevention programmes should ensure that such programmes are flexible enough to accommodate participants' different needs and preferences and should promote the social value of such programmes. [2004]

Education and Information Giving

All healthcare professionals dealing with patients known to be at risk of falling should develop and maintain basic professional competence in falls assessment and prevention. [2004]

Individuals at risk of falling, and their carers, should be offered information orally and in writing about:

- What measures they can take to prevent further falls
- How to stay motivated if referred for falls prevention strategies that include exercise or strength and balancing components
- The preventable nature of some falls
- The physical and psychological benefits of modifying falls risk
- Where they can seek further advice and assistance
- How to cope if they have a fall, including how to summon help and how to avoid a long lie [2004]

Interventions That Cannot Be Recommended

Brisk walking. There is no evidence¹ that brisk walking reduces the risk of falling. One trial showed that an unsupervised brisk walking programme increased the risk of falling in postmenopausal women with an upper limb fracture in the previous year. However, there may be other health benefits of brisk walking by older people. [2004]

Interventions That Cannot Be Recommended Because of Insufficient Evidence

The authors do not recommend implementation of the following interventions at present. This is not because there is strong evidence against them, but because there is insufficient or conflicting evidence supporting them¹. [2004]

Low intensity exercise combined with incontinence programmes. There is no evidence¹ that low intensity exercise interventions combined with continence promotion programmes reduce the incidence of falls in older people in extended care settings. [2004]

Group exercise (untargeted). Exercise in groups should not be discouraged as a means of health promotion, but there is little evidence¹ that exercise interventions that were not individually prescribed for older people living in the community are effective in falls prevention. [2004]

Cognitive/behavioural interventions. There is no evidence¹ that cognitive/behavioural interventions alone reduce the incidence of falls in older people living in the community who are of unknown risk status. Such interventions included risk assessment with feedback and counselling and individual education discussions. There is no evidence¹ that complex interventions in which group activities included education, a behaviour modification programme aimed at moderating risk, advice and exercise interventions are effective in falls prevention with older people living in the community. [2004]

Referral for correction of visual impairment. There is no evidence¹ that referral for correction of vision as a single intervention for older people living in the community is effective in reducing the number of people falling. However, vision assessment and referral has been a component of successful multifactorial falls prevention programmes. [2004]

Vitamin D. There is evidence¹ that vitamin D deficiency and insufficiency are common among older people and that, when present, they impair muscle strength and possibly neuromuscular function, via central nervous system (CNS)-mediated pathways. In addition, the use of combined

calcium and vitamin D3 supplementation has been found to reduce fracture rates in older people in residential/nursing homes and sheltered accommodation. Although there is emerging evidence¹ that correction of vitamin D deficiency or insufficiency may reduce the propensity for falling, there is uncertainty about the relative contribution to fracture reduction via this mechanism (as opposed to bone mass) and about the dose and route of administration required. No firm recommendation can therefore currently be made on its use for this indication.² [2004, amended 2013]

Hip protectors. Reported trials that have used individual patient randomisation have provided no evidence¹ for the effectiveness of hip protectors to prevent fractures when offered to older people living in extended care settings or in their own homes. Data from cluster randomised trials provide some evidence¹ that hip protectors are effective in the prevention of hip fractures in older people living in extended care settings who are considered at high risk. [2004]

Preventing Falls in Older People During a Hospital Stay

Predicting Patients' Risk of Falling in Hospital

Do not use fall risk prediction tools to predict inpatients' risk of falling in hospital. [new 2013]

Regard the following groups of inpatients as being at risk of falling in hospital and manage their care according to recommendations below:

- All patients aged 65 years or older
- Patients aged 50 to 64 years who are judged by a clinician to be at higher risk of falling because of an underlying condition. [new 2013]

Assessment and Interventions

Ensure that aspects of the inpatient environment (including flooring, lighting, furniture and fittings such as hand holds) that could affect patients' risk of falling are systematically identified and addressed. [new 2013]

For patients at risk of falling in hospital (see recommendations above), consider a multifactorial assessment and a multifactorial intervention. [new 2013]

Ensure that any multifactorial assessment identifies the patient's individual risk factors for falling in hospital that can be treated, improved or managed during their expected stay. These may include:

- Cognitive impairment
- Continence problems
- Falls history, including causes and consequences (such as injury and fear of falling)
- Footwear that is unsuitable or missing
- Health problems that may increase their risk of falling
- Medication
- Postural instability, mobility problems and/or balance problems
- Syncope syndrome
- Visual impairment [new 2013]

Ensure that any multifactorial intervention:

- Promptly addresses the patient's identified individual risk factors for falling in hospital and
- Takes into account whether the risk factors can be treated, improved or managed during the patient's expected stay. [new 2013]

Do not offer falls prevention interventions that are not tailored to address the patient's individual risk factors for falling. [new 2013]

Information and Support

Provide relevant oral and written information and support for patients, and their family members and carers if the patient agrees. Take into account the patient's ability to understand and retain information. Information should include:

- Explaining about the patient's individual risk factors for falling in hospital
- Showing the patient how to use the nurse call system and encouraging them to use it when they need help
- Informing family members and carers about when and how to raise and lower bed rails
- Providing consistent messages about when a patient should ask for help before getting up or moving about
- Helping the patient to engage in any multifactorial intervention aimed at addressing their individual risk factors [new 2013]

Ensure that relevant information is shared across services. Apply the principles in [Patient experience in adult NHS services \(NICE clinical guideline 138\)](#) in relation to continuity of care. [new 2013]

¹ This refers to evidence reviewed in 2004.

² The following text has been deleted from the 2004 recommendation: "Guidance on the use of vitamin D for fracture prevention will be contained in the forthcoming NICE clinical practice guideline on osteoporosis, which is currently under development." As yet there is no NICE guidance on the use of vitamin D for fracture prevention.

Definitions:

Strength of Recommendations

Some recommendations can be made with more certainty than others. The Guideline Development Group (GDG) makes a recommendation based on the trade-off between the benefits and harms of an intervention, taking into account the quality of the underpinning evidence. For some interventions, the GDG is confident that, given the information it has looked at, most patients would choose the intervention. The wording used in the recommendations labelled [new 2013] in this guideline denotes the certainty with which the recommendation is made (the strength of the recommendation).

For all recommendations, NICE expects that there is discussion with the patient about the risks and benefits of the interventions, and their values and preferences. This discussion aims to help them to reach a fully informed decision (see also "Patient-centred care" in the original guideline document).

Interventions That Must (or Must Not) Be Used

The GDG usually uses "must" or "must not" only if there is a legal duty to apply the recommendation. Occasionally they use "must" (or "must not") if the consequences of not following the recommendation could be extremely serious or potentially life threatening.

Interventions That Should (or Should Not) Be Used – A "Strong" Recommendation

The GDG uses "offer" (and similar words such as "refer" or "advise") when they are confident that, for the vast majority of patients, an intervention will do more good than harm, and be cost effective. The GDG uses similar forms of words (for example, "Do not offer...") when they are confident that an intervention will not be of benefit for most patients.

Interventions That Could Be Used

The GDG uses "consider" when they are confident that an intervention will do more good than harm for most patients, and be cost-effective, but other options may be similarly cost-effective. The choice of intervention, and whether or not to have the intervention at all, is more likely to depend on the patient's values and preferences than for a strong recommendation, and so the healthcare professional should spend more time considering and discussing the options with the patient.

Wording of 2004 Recommendations

NICE began using this approach to denote the strength of recommendations in guidelines that started development after publication of the 2009 version of "The guidelines manual" (January 2009). This does not apply to any recommendations ending [2004] (see the "Major Recommendations" field). In particular, for recommendations labelled [2004], the word "consider" may not necessarily be used to denote the strength of the recommendation.

Clinical Algorithm(s)

The following are available:

- A care pathway for the recommendations in this guideline is available in the original guideline document.
- A NICE pathway titled "Falls in Older People Overview" is available from the [National Institute for Health and Care Excellence \(NICE\)](#) Web site .

Scope

Disease/Condition(s)

Fall-related injuries

Guideline Category

Counseling

Prevention

Risk Assessment

Clinical Specialty

Family Practice

Geriatrics

Internal Medicine

Nursing

Physical Medicine and Rehabilitation

Preventive Medicine

Intended Users

Advanced Practice Nurses

Allied Health Personnel

Emergency Medical Technicians/Paramedics

Health Care Providers

Hospitals

Nurses

Patients

Physician Assistants

Physicians

Psychologists/Non-physician Behavioral Health Clinicians

Public Health Departments

Guideline Objective(s)

- To provide recommendations for the assessment and prevention of falls in older people
- To extend and replace National Institute for Health and Care Excellence (NICE) clinical guideline 21 (published November 2004)

Target Population

- All people aged 65 or older
- People aged 50 to 64 who are admitted to hospital and are judged by a clinician to be at higher risk of falling because of an underlying

Interventions and Practices Considered

Preventing Falls in Older People

1. Case/risk identification
2. Individualised multifactorial falls risk assessment
 - Identification of falls history
 - Assessment of gait, balance and mobility, and muscle weakness
 - Assessment of osteoporosis risk
 - Assessment of the older person's perceived functional ability and fear relating to falling
 - Assessment of visual impairment
 - Assessment of cognitive impairment and neurological examination
 - Assessment of urinary incontinence
 - Assessment of home hazards
 - Cardiovascular examination and medication review
3. Individualised multifactorial interventions
 - Strength and balance training
 - Exercise in extended care settings
 - Home hazard assessment and safety intervention
 - Vision assessment and referral
 - Medication review with modification/withdrawal
 - Cardiac pacing
 - Encouraging the participation of older people in falls prevention programmes
 - Education and information giving

Note: The following interventions were considered but not recommended for falls prevention:

Brisk walking
Low-intensity exercise combined with incontinence programme
Group exercise (untargeted)
Cognitive/behavioural interventions
Referral for correction of visual impairment
Vitamin D supplementation
Hip protectors

Preventing Falls in Older People During a Hospital Stay

1. Predicting patients' risk of falling in hospital (fall risk prediction tools not recommended)
2. Assessment and interventions
 - Ensuring that aspects of the inpatient environment that could affect patients' risk of falling are systematically identified and addressed
 - Multifactorial assessment and multifactorial intervention
 - Tailoring falls prevention intervention to the patient's individual risk
3. Information and support for patients, and their family members and carers

Major Outcomes Considered

- Rate of falls (and proportion of people who fall)
- Impact of falls and complications as a consequence of falls
- Mortality
- Patient satisfaction and experience of falls prevention, interventions and strategies
- Quality of life (for example, fear, confidence and functioning)
- Activities of daily living
- Adherence to falls prevention strategies (by patients, healthcare professionals and other staff)

- Resource use and cost (for example, length of stay)

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Searches of Unpublished Data

Description of Methods Used to Collect/Select the Evidence

Note from the National Guideline Clearinghouse (NGC): This guideline was developed by the Centre for Clinical Practice at the National Institute for Health and Care Excellence (NICE). See the "Availability of Companion Documents" field for the full version of this guidance.

The methods used to develop this guideline were different for the different sections, because of the evolution of guideline development methodology. The section for all older people comprises the previous 2004 guideline (CG21), which has been maintained as far as possible in its original structure and style. The additional section for older people who are admitted to hospital contains new evidence and recommendations that were developed using The Guidelines Manual (2009). This has inevitably led to inconsistencies in style.

Previous 2004 Guideline

The following sources of evidence were used to inform the guideline:

- The Cochrane reviews: a) Interventions for the prevention of falls in older people and b) Hip protectors for the prevention of hip fractures
- American Geriatric Society/British Geriatric Society (2001) clinical guidelines that were based on the systematic review Falls prevention interventions in the Medicare population
- Analysis of epidemiological data relating to risk factors (National Collaborating Centre for Nursing and Supportive Care [NCC-NSC])
- Reviews of assessment processes, tools, tests and instruments for identifying those at risk (NCC-NSC)
- Review of studies examining patients' views and experiences of falls prevention programmes and methods to maximise participation (NCC-NSC)
- Reviews of studies on fear of falling and interventions to reduce the psychosocial consequences of falling (NCC-NSC)
- Reviews of the evidence on costs and economic evaluations (School of Health and Related Research [SCHARR])
- Reviews of rehabilitation strategies (NCC-NSC)

Details on the methods and the main results for each review are reported in Sections 3.3.1 to 3.3.14 of the full version of the original guideline document.

Updated 2013 Guideline

Scoping Searches

Scoping searches were undertaken on websites and databases in August 2011 to provide information for scope development and project planning. Browsing or simple search strategies were employed. See Appendix B in the full version of the original guideline document for a list of websites and databases searched.

Main Searches

Sources Searched for the Guideline

- Cochrane Database of Systematic Reviews – CDSR (Wiley)
- Cochrane Central Register of Controlled Trials – CENTRAL (Wiley)
- Database of Abstracts of Reviews of Effects – DARE (Wiley and CRD Web site)

- Health Technology Assessment Database – HTA (Wiley and CRD Web site)
- EMBASE (Ovid)
- MEDLINE (Ovid)
- MEDLINE In-Process (Ovid)

Identification of Evidence for Clinical Question

The searches were conducted between November 2011 and March 2012. The aim of the searches was to identify evidence for each of the clinical questions being asked. The MEDLINE search strategies are presented in Appendix B of the full version of the guideline (see the "Availability of Companion Documents" field). These were translated for use in all of the other databases.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Levels of Evidence (2004 Guideline)

I: Evidence from meta-analysis of randomised controlled trials or at least one randomised controlled trial

II: Evidence from at least one controlled trial without randomisation or at least one other type of quasi-experimental study

III: Evidence from non-experimental descriptive studies, such as comparative studies, correlation studies, and case-control studies

IV: Evidence from expert committee reports or opinions and/or clinical experience of respected authorities

Overall Quality of Outcome Evidence in GRADE (Grading of Recommendations Assessment, Development and Evaluation) (2013 Updated Guideline)

Level	Description
High	Further research is very unlikely to change confidence in the estimate of effect
Moderate	Further research is likely to have an important impact on confidence in the estimate of effect and may change the estimate
Low	Further research is very likely to have an important impact on confidence in the estimate of effect and is likely to change the estimate
Very Low	Any estimate of effect is very uncertain

Methods Used to Analyze the Evidence

Meta-Analysis

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Note from the National Guideline Clearinghouse (NGC): This guideline was developed by the Centre for Clinical Practice at the National Institute for Health and Care Excellence (NICE). See the "Availability of Companion Documents" field for the full version of this guidance.

The methods used to develop this guideline were different for the different sections, because of the evolution of guideline development

methodology. The section for all older people comprises the previous 2004 guideline (CG21), which has been maintained as far as possible in its original structure and style. The additional section for older people who are admitted to hospital contains new evidence and recommendations that were developed using The guidelines manual (2009). This has inevitably led to inconsistencies in style. For example, Grading of Recommendations Assessment, Development, and Evaluation (GRADE) methodology is used in the newer sections of the guideline to assess the quality and strength of the evidence and recommendations, whereas in the older 2004 section of guidelines, the evidence and recommendations are graded using the old evidence hierarchy.

Previous 2004 Guideline Methods

Questions addressed by the evidence reviews included:

- What is the best method of identifying those at highest risk of a first or subsequent fall? (Source of evidence: risk factor evidence review)
- What assessment tool or process should be used to identify modifiable risk factors for falling? (Source of evidence: assessment evidence review)
- What are the most clinically effective and cost effective methods for falls prevention? (Source of evidence: clinical and cost effectiveness reviews)
- What interventions are there to reduce the psychosocial consequences of falling? (Source of evidence: Cochrane review)
- What is the evidence for the effectiveness of hip protectors? (Cochrane review)
- What is the best method for maximising participation and compliance in falls prevention programmes and modification of specific risk factors, for example, medication withdrawal/review? (Source of evidence: patients' views and experiences)
- Are falls prevention programmes acceptable to patients? (Source of evidence: patients' views and experiences review)
- What is the best method of rehabilitation/intervention/process of care following a fall requiring treatment? (Source of evidence: rehabilitation review, hip protector review and Cochrane falls prevention review)

The methods and the main results for each review are reported in Sections 3.3.1 to 3.3.14 of the full versions of the original guideline document. The detailed evidence summaries – including economic evidence, where relevant – evidence statements, Guideline Development Group considerations and recommendations are in Section 3.4 of the full version of the guideline.

Updated 2013 Guideline Methods

Questions addressed by the evidence reviews included:

- What risk prediction tool(s) or process(es) should be used to identify modifiable and non-modifiable risk factors for falling for patients in hospital? Does this method vary by inpatient setting?
- What interventions reduce older patients' risk of falling and/or the severity of a fall in hospital, compared with usual care? Which interventions are the most effective? Does the intervention vary by inpatient setting?
- What are the education and information needs of patients and their family members and carers after a hospital-based falls risk assessment, or a fall in hospital?

The methods and the main results for each review are reported in Section 4 of the full version of the original guideline document.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Note from the National Guideline Clearinghouse (NGC): This guideline was developed by the Centre for Clinical Practice at the National Institute for Health and Care Excellence (NICE). See the "Availability of Companion Documents" field for the full version of this guidance.

This guideline is an extension to the remit of NICE clinical guideline 21 (published November 2004) to include assessing and preventing falls in older people during a hospital stay (inpatients).

The 2 main parts of the guideline are as follows:

- Recommendations for all older people (Sections 1.1 and 3 of the full version of the guideline). Evidence on the assessment and prevention of falls in older people has not been updated and the original 2004 recommendations remain unchanged (except for some minor wording

changes for the purposes of clarification only). This part was originally developed by the National Collaborating Centre for Nursing and Supportive Care (now part of the National Clinical Guideline Centre) and published by the Royal College of Nursing.

- Additional recommendations for older people who are admitted to hospital (Sections 1.2 and 4 of the full version of the guideline). New evidence has been reviewed and new recommendations have been made for assessing and preventing falls in older people during a hospital stay. This part was developed by the Internal Clinical Guidelines Programme in the Centre for Clinical Practice at NICE.

Methods Used to Develop the Guideline

The methods used to develop this guideline were different for the different sections, because of the evolution of guideline development methodology.

The section for all older people (section 3 of the full version of the guideline) comprises the previous 2004 guideline (CG21), which has been maintained as far as possible in its original structure and style (although it has been renumbered to maintain consistency throughout the entire guideline). The additional section for older people who are admitted to hospital (section 4 of the full version of the guideline) contains new evidence and recommendations that were developed using The guidelines manual (2009). This has inevitably led to inconsistencies in style. For example, Grading of Recommendations Assessment, Development, and Evaluation (GRADE) methodology is used in section 4 to assess the quality and strength of the evidence and recommendations, whereas in section 3 the evidence and recommendations are graded using the old evidence hierarchy. In addition, in section 3 (developed in 2004) older people are defined as those aged 65 and older, but more recently the Department of Health has recognised that there are different interpretations of 'older people', some of which include people from the age of 50. Section 4 of the guideline reflects this, and the new recommendations also cover people aged between 50 and 64. The different sections of the guideline contain details of the methodology used at the time of development.

It is important to emphasise that although guideline methodology has changed over time, all of the 2004 recommendations are just as relevant and important now as they were when they were originally published.

Rating Scheme for the Strength of the Recommendations

2004 Guideline Strength of Recommendations

Grade A - Directly based on category I evidence

Grade B - Directly based on category II evidence or extrapolated recommendation from category I evidence

Grade C - Directly based on category III evidence or extrapolated recommendation from category I or II evidence

Grade D - Directly based on category IV evidence or extrapolated recommendation from category I, II, or III evidence

2013 Guideline Strength of Recommendations

Some recommendations can be made with more certainty than others. The Guideline Development Group (GDG) makes a recommendation based on the trade-off between the benefits and harms of an intervention, taking into account the quality of the underpinning evidence. For some interventions, the GDG is confident that, given the information it has looked at, most patients would choose the intervention. The wording used in the recommendations labelled [new 2013] in this guideline denotes the certainty with which the recommendation is made (the strength of the recommendation).

Interventions That Must (or Must Not) Be Used

The GDG usually uses "must" or "must not" only if there is a legal duty to apply the recommendation. Occasionally they use "must" (or "must not") if the consequences of not following the recommendation could be extremely serious or potentially life threatening.

Interventions That Should (or Should Not) Be Used – A "Strong" Recommendation

The GDG uses "offer" (and similar words such as "refer" or "advise") when they are confident that, for the vast majority of patients, an intervention will do more good than harm, and be cost-effective. The GDG uses similar forms of words (for example, "Do not offer...") when they are confident that an intervention will not be of benefit for most patients.

Interventions That Could Be Used

The GDG uses "consider" when they are confident that an intervention will do more good than harm for most patients, and be cost-effective, but other options may be similarly cost-effective. The choice of intervention, and whether or not to have the intervention at all, is more likely to depend

on the patient's values and preferences than for a strong recommendation, and so the healthcare professional should spend more time considering and discussing the options with the patient.

Wording of 2004 Recommendations

National Institute for Health and Care Excellence (NICE) began using this approach to denote the strength of recommendations in guidelines that started development after publication of the 2009 version of "The guidelines manual" (January 2009). This does not apply to any recommendations ending [2004] (see the "Major Recommendations" field). In particular, for recommendations labeled [2004], the word "consider" may not necessarily be used to denote the strength of the recommendation.

Cost Analysis

2004 Guideline Cost Analysis

Cost-Effectiveness Review and Modelling: Methods and Results

To fulfil the Department of Health (DH) and Welsh Assembly Government remit, the National Institute for Health and Care Excellence (NICE) requested that the cost-effectiveness evidence of interventions for the assessment and prevention of falls in older people be assessed. In accordance with the objectives of the scope, cost-effectiveness was addressed in the following way:

- A comparison of the cost and cost-effectiveness of falls prevention interventions compared with usual care, other intentions or no intervention
- An investigation of which types of falls prevention programmes are the most cost-effective.

The aim of the review was twofold. Firstly, to identify economic evaluations that had been conducted alongside trials and secondly, to identify evidence that could be used in cost-effectiveness modelling.

Summary of the Health Economics Evidence

Although clinical and cost-effectiveness data exists for falls prevention, there are no UK studies. The quality of reporting in these studies is often patchy, as some costs and benefits are reported and not others. The reported studies did not use the same costing methods or always report incremental costs or discounting.

Those from countries other than the UK have limited applicability as the health care systems are often very different. Even in the small number of studies included, few comparisons can be made between studies due to the differences in methodology.

Identifying those individuals who may benefit most from an intervention is not always reported: who should be targeted for screening; when screening should take place; and at what intervals is an area of considerable uncertainty in terms of costs and benefits.

There is a lack of cost-effectiveness evidence in this area and therefore, the guideline development group (GDG) would recommend further research.

The Cost-Effectiveness of Interventions to Prevent Falls in the Elderly: Modelling Report

Cost-effectiveness analyses of two falls prevention strategies were reported; exercise programmes for at risk individuals dwelling in the community and multifactorial interventions for at risk individuals dwelling in the community.

The central estimates for the incremental cost-effectiveness ratio (ICER) for both the multifactorial and exercise intervention indicate that both interventions are cost-effective, compared to doing nothing. However, these results must be interpreted with great caution. The bootstrapped confidence intervals around the ICERs are large, reflecting the great uncertainty surrounding the evidence for the effect, and indeed the costs of providing the interventions and the costs of treating fall related injuries.

For further results and discussion please refer to Section 3.4 of the full version of the original guideline document.

2013 Guideline Cost Analysis

Inpatient Falls Prevention Interventions: Health Economic Modeling

In the absence of relevant published literature, an original health economic De novo model was constructed.

Decision Problem

The health economic analysis addressed one question from the guideline scope, based on GDG prioritisation:

- What is the cost-effectiveness of multifactorial interventions to reduce the risk and/or severity of inpatient falls for patients aged 65+, compared with usual care (assumed to be no actions to prevent falls)?

The GDG recommended that single interventions should not be used to reduce the risk and/or severity of inpatient falls. Therefore, only multifactorial interventions were considered for health economic modelling.

Model Structure

The model used a discrete event (or individual patient) structure, capturing the costs and benefits associated with a series of events and discrete health states. A discrete event model was used to accurately model each patient's falls history, variable lifespan and differing time in each state (for more details, see Appendix K of the full version of the original guideline document).

Principal Findings

It would appear that, if inpatient falls can be prevented and/or their severity reduced, this is very likely to be a cost-effective course of action.

However, in both settings, the difference in quality-adjusted life-years (QALYs) is small, as can be seen in Figure 3 of the full version of the original guideline document. The changes represent less than 0.06% of lifetime QALYs in the model. The cost differences are slightly bigger, but still less than 0.7% of an average patient's total lifetime costs.

A difference of 0.003 QALYs or less (1 quality-adjusted day or less) may be viewed as clinically not relevant over an average lifetime of ten years. However, the average experience of the simulated cohort contains a great heterogeneity of experience, and some simulated patients will have derived very appreciable benefit from having falls averted during their hospitalisation(s). Certainly, the 25% reduction in fall rates (taken from the meta-analysis) was thought to be clinically significant by the GDG. Cost differences were small but generally indicated savings in both settings. Therefore, the intervention can probably be said to be cost-effective in the acute and non-acute settings, compared with no action to reduce the rate and/or severity of inpatient falls.

Refer to Section 4.4.4 of the full version of the original guideline for further discussion of this economic model.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

The guideline was validated through two consultations.

1. The first draft of the guideline (the full guideline, National Institute for Health and Care Excellence [NICE] guideline, and Quick Reference Guide) were consulted with Stakeholders and comments were considered by the Guideline Development Group (GDG).
2. The final consultation draft of the Full guideline, the NICE guideline and the Information for the Public were submitted to stakeholders for final comments.

The final draft was submitted to the Guideline Review Panel for review prior to publication.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of evidence supporting the recommendations is not specifically stated.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Implementation of the recommendations may ensure that older people at risk from falls receive appropriate management and care to prevent the occurrence of falls, improve outcomes, and minimize recurrence of injury due to falls.

Potential Harms

Not stated

Qualifying Statements

Qualifying Statements

- This guidance represents the view of the National Institute for Health and Care Excellence (NICE), which was arrived at after careful consideration of the evidence available. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. However, the guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer, and informed by the summary of product characteristics of any drugs.
- Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity and foster good relations. Nothing in this guidance should be interpreted in a way that would be inconsistent with compliance with those duties.
- Patients and healthcare professionals have rights and responsibilities as set out in the National Health Service (NHS) Constitution for England – all NICE guidance is written to reflect these. Treatment and care should take into account individual needs and preferences. Patients should have the opportunity to make informed decisions about their care and treatment, in partnership with their healthcare professionals. Healthcare professionals should follow the Department of Health's advice on consent. If someone does not have the capacity to make decisions, healthcare professionals should follow the code of practice that accompanies the Mental Capacity Act and the supplementary code of practice on deprivation of liberty safeguards. In Wales, healthcare professionals should follow advice on consent from the Welsh Government.
- NICE has produced guidance on the components of good patient experience in adult NHS services. All healthcare professionals should follow the recommendations in Patient experience in adult NHS services.
- For all recommendations, NICE expects that there is discussion with the service user about the risks and benefits of the interventions, and their values and preferences. This discussion aims to help them to reach a fully informed decision (see also Patient-centred care).

Implementation of the Guideline

Description of Implementation Strategy

The National Institute for Health and Care Excellence (NICE) has developed tools to help organisations implement this guidance. These are available on the [NICE Web site](#) (see also the "Availability of Companion Documents" field).

Key Priorities for Implementation

The following recommendations have been identified as priorities for implementation.

Preventing Falls in Older People

- Older people in contact with healthcare professionals should be asked routinely whether they have fallen in the past year and asked about

the frequency, context and characteristics of the fall(s). [2004]

- Older people who present for medical attention because of a fall, or report recurrent falls in the past year, or demonstrate abnormalities of gait and/or balance should be offered a multifactorial falls risk assessment. This assessment should be performed by a healthcare professional with appropriate skills and experience, normally in the setting of a specialist falls service. This assessment should be part of an individualised, multifactorial intervention. [2004]

Preventing Falls in Older People during a Hospital Stay

- Regard the following groups of inpatients as being at risk of falling in hospital and manage their care according to recommendations for assessment and interventions:
 - All patients aged 65 years or older
 - Patients aged 50 to 64 years who are judged by a clinician to be at higher risk of falling because of an underlying condition [new 2013]
- For patients at risk of falling in hospital, consider a multifactorial assessment and a multifactorial intervention. [new 2013]
- Ensure that any multifactorial assessment identifies the patient's individual risk factors for falling in hospital that can be treated, improved or managed during their expected stay. These may include:
 - Cognitive impairment
 - Continence problems
 - Falls history, including causes and consequences (such as injury and fear of falling)
 - Footwear that is unsuitable or missing
 - Health problems that may increase their risk of falling
 - Medication
 - Postural instability, mobility problems and/or balance problems
 - Syncope syndrome
 - Visual impairment [new 2013]

Implementation Tools

Audit Criteria/Indicators

Clinical Algorithm

Foreign Language Translations

Mobile Device Resources

Patient Resources

Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

National Institute for Health and Care Excellence (NICE). Falls: assessment and prevention of falls in older people. London (UK): National Institute for Health and Care Excellence (NICE); 2013 Jun. 33 p. (Clinical guideline; no. 161).

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2004 Jun (revised 2013 Jun)

Guideline Developer(s)

National Institute for Health and Care Excellence (NICE) - National Government Agency [Non-U.S.]

Source(s) of Funding

National Institute for Health and Care Excellence (NICE)

Guideline Committee

Guideline Development Group

Composition of Group That Authored the Guideline

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Financial Disclosures/Conflicts of Interest

All members of the Guideline Development Group (GDG) were required to make formal declarations of interest at the outset, which were recorded. GDG members were also asked to declare interests at the beginning of each GDG meeting. This information is recorded in the meeting minutes and kept on file at the National Collaborating Centre for Nursing and Supportive Care (NCC-NSC). GDG declarations of interest can be found in Appendix A of the full version of the original guideline document (see the "Availability of Companion Documents" field).

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: National Collaborating Centre for Nursing and Supportive Care. Clinical practice guideline for the assessment and prevention of falls in older people. London (UK): National Institute for Clinical Excellence (NICE); 2004 Jun. 185 p.

Guideline Availability

Electronic copies: Available from the [National Institute for Health and Care Excellence \(NICE\) Web site](#) . Also available for download in ePub and eBook formats from the [NICE Web site](#) .

Availability of Companion Documents

The following are available:

- Falls: assessment and prevention of falls in older people. Full guideline. London (UK): National Institute for Health and Care Excellence (NICE); 2013 Jun. 315 p. (Clinical guideline; no. 161). Electronic copies: Available from the [National Institute for Health and Care Excellence \(NICE\) Web site](#) .
- Falls: assessment and prevention of falls in older people. Appendices. London (UK): National Institute for Health and Care Excellence (NICE); 2013 Jun. Various p. (Clinical guideline; no. 161). Electronic copies: Available from the [NICE Web site](#) .
- Falls: assessment and prevention of falls in older people. Appendices from CG21. London (UK): National Institute for Health and Care Excellence (NICE); 2013 Jun. Various p. (Clinical guideline; no. 161). Electronic copies: Available from the [NICE Web site](#) .
- Falls: assessment and prevention of falls in older people. Baseline assessment tool. London (UK): National Institute for Health and Care Excellence (NICE); 2013 Jun. (Clinical guideline; no. 161). Electronic copies: Available from the [NICE Web site](#) .
- Falls: assessment and prevention of falls in older people. Clinical audit tools. London (UK): National Institute for Health and Care Excellence (NICE); 2013 Jun. (Clinical guideline; no. 161). Electronic copies: Available from the [NICE Web site](#) .
- Falls: assessment and prevention of falls in older people. Costing statement. London (UK): National Institute for Health and Care Excellence (NICE); 2013 Jun. 8 p. (Clinical guideline; no. 161). Electronic copies: Available from the [NICE Web site](#) .
- Falls: assessment and prevention of falls in older people. Podcast. London (UK): National Institute for Health and Care Excellence (NICE); 2013 Jun. (Clinical guideline; no. 161). Electronic copies: Available from the [NICE Web site](#) .
- Falls in older people. Overview. NICE pathway. London (UK): National Institute for Health and Care Excellence (NICE). 2013 Jun. (Clinical guideline; no. 161). Electronic copies: Available from the [NICE Web site](#) .

Patient Resources

The following is available:

- Preventing falls in older people. Information for the public. London (UK): National Institute for Health and Care Excellence (NICE); 2013 Jun. (Clinical guideline; no. 161). Available from the [National Institute for Health and Care Excellence \(NICE\) Web site](#) . Also available for download in ePub and eBook formats from the [NICE Web site](#) . Also available in Welsh from the [NICE Web site](#) .

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NGC Status

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